Vol. 27, pp. 107–214

CONTENTS

No. 2, 1993

108 W. J. Unger and J. S. Hansen

The Effect of Cooling Rate and Annealing on Residual Stress Development in Graphite Fibre Reinforced PEEK Laminates

138 Hsuan-Teh Hu

Influence of In-Plane Shear Nonlinearity on Buckling and Postbuckling Responses of Composite Plates and Shells

152 P. Pluvinage and J. M. Quenisset

Numerical Simulation of the Tensile Behavior of 2D-SiC/SiC Cross-Ply Laminates

175 L. P. Chao, M. V. Gandhi and B. S. Thompson

A Design-for-Manufacture Methodology for Incorporating Manufacturing Uncertainties in the Robust Design of Fibrous Laminated Composite Structures

195 V. Nassehi, M. Kinsella and L. Mascia

Finite Element Modelling of the Stress Distribution in Polymer Composites with Coated Fibre Interlayers

Vol. 27, pp. 215–329

CONTENTS

No. 3, 1993

216 T. E. Twardowski, S. E. Lin and P. H. Geil

Curing in Thick Composite Laminates: Experiment and Simulation

251 S-W. R. Lee and C. T. Sun

A Quasi-Static Penetration Model for Composite Laminates

272 M.-H. R. Jen, Y. S. Kau and J. M. Hsu

Initiation and Propagation of Delamination in a Centrally Notched Composite Laminate

303 G. P. Carman, J. J. Lesko, K. L. Reifsnider and D. A. Dillard

Micromechanical Model of Composite Materials Subjected to Ball Indentation

Vol. 27, pp. 331–434

CONTENTS

No. 4, 1993

332 J. Avrashi, C. H. Lin, B. J. Rauch, J. Rhee and R. E. Rowlands

Non-Uniform Finite Strip Method for Flexed Composite Plates

352 M. J. Lamborn and R. A. Schapery

An Investigation of the Existence of a Work Potential for Fiber-Reinforced Plastic

383 F. E. Penado

A Closed Form Solution for the Energy Release Rate of the Double Cantilever Beam Specimen with an Adhesive Layer

408 R. M. Sullivan

A Coupled Solution Method for Predicting the Thermostructural Response of Decomposing, Expanding Polymeric Composites

Vol. 27, pp. 435–538

CONTENTS

No. 5, 1993

436 Sheng Liu, Zafer Kutlu and Fu-Kuo Chang

Matrix Cracking and Delamination in Laminated Composite Beams Subjected to a Transverse Concentrated Line Load

471 E. T. Camponeschi, Jr., J. W. Gillespie, Jr. and D. J. Wilkins

Kink-Band Failure Analysis of Thick Composites in Compression

491 P. D. Herrington and M. Sabbaghian

Fatigue Failure of Composite Bolted Joints

513 H. J. Lin and S. H. Yang

Modeling and Analysis of Composite Laminates with Continuous Fiber around a Circular Hole

526 D. Jegley

Impact-Damaged Graphite-Thermoplastic Trapezoidal-Corrugation Sandwich and Semi-Sandwich Panels

Vol. 26, pp. 539–644

CONTENTS

No. 6, 1993

540 Autar K. Kaw and Nicholas J. Pagano

Axisymmetric Thermoelastic Response of a Composite Cylinder Containing an Annular Matrix Crack

572 Yong Li Xu and Kenneth L. Reifsnider

Micromechanical Modeling of Composite Compressive Strength

589 Gregory P. Carman, Ronald C. Averill, Kenneth L. Reifsnider and J. N. Reddy

Optimization of Fiber Coatings to Minimize Stress Concentrations in Composite Materials

613 Rangarajan Pitchumani and Shi-Chune Yao

Non-Dimensional Analysis of an Idealized Thermoset Composites Manufacture

637 D. P. H. Hasselman, K. Y. Donaldson and J. R. Thomas, Jr.

Effective Thermal Conductivity of Uniaxial Composite with Cylindrically Orthotropic Carbon Fibers and Interfacial Thermal Barrier

Vol. 27, pp. 645–753

CONTENTS

No. 7, 1993

646 F. J. Guild, S. L. Ogin and P. A. Smith

Modelling of 90° Ply Cracking in Crossply Laminates, Including Three-Dimensional Effects

668 A. Demain and J.-P. Issi

The Effect of Fiber Concentration on the Thermal Conductivity of a Polycarbonate/Pitch-Based Carbon Fiber Composite

684 C. J. Jih and C. T. Sun

Prediction of Delamination in Composite Laminates Subjected to Low Velocity Impact

702 Robert S. Gross and James G. Goree

An Experimental and Analytical Investigation of Composite Drive Shafts with Non-Circular End Cross-Sections

721 Chin Fang and George S. Springer

Design of Composite Laminates by a Monte Carlo Method

Vol. 27, pp. 755–860

CONTENTS

No. 8, 1993

756 Wayne C. Tucker, Sang-Baek Lee and Tom Rockett

The Effects of Pressure on Water Transport in Polymers

764 L. E. Doxsee, P. Rubbrecht, L. Li, I. Verpoest and M. Scholle

Delamination Growth in Composite Plates Subjected to Transverse Loads

782 Kai-Youarn Hour and Huseyin Sehitoglu

Damage Development in a Short Fiber Reinforced Composite

806 Ever J. Barbero, Roberto Lopez-Anido and Julio F. Davalos

On the Mechanics of Thin-Walled Laminated Composite Beams

830 Steven D. Gardner, Charles U. Pittman, Jr. and Robert M. Hackett

Residual Thermal Stresses in Filamentary Polymer-Matrix Composites Containing an Elastomeric Interphase

Vol. 27, pp. 861–960

CONTENTS

No. 9, 1993

862 A. W.-L. Chen, A. Miyase, P. H. Geil and S. S. Wang

Anelastic Deformation of a Thermoplastic-Matrix Fiber Composite at Elevated Temperature; Part I: Neat Resin Structure Characterization

886 A. Miyase, A. W.-L. Chen, P. H. Geil and S. S. Wang

Anelastic Deformation of a Thermoplastic-Matrix Fiber Composite at Elevated Temperature; Part II: Time-Temperature Dependent Matrix Behavior

908 A. Miyase, S. S. Wang, A. W.-L. Chen and P. H. Geil

Anelastic Deformation of a Thermoplastic-Matrix Fiber Composite at Elevated Temperature; Part III: Structure and Thermomechanical Properties of AS4/PACM-12 Composite

921 R. Frassine, M. Rink and A. Pavan

Viscoelastic Effects on Intralaminar Fracture Toughness of Epoxy/Carbon-Fibre Laminates

934 John J. Ditri and Joseph L. Rose

An Experimental Study on the Use of Static Effective Modulus Theories in Dynamic Problems

944 Y. T. Zhu and Guisheng Zong

On the Application of the Statistical Strength Model of Fiber-Reinforced Composites

Vol. 27, pp. 961–1051

CONTENTS

No. 10, 1993

962 K. Y. Rhee and H. A. Ernst

A Study on the Application of Work Factor Approach to Composite Laminates

973 Nan-Ming Yeh and Erhard Krempl

The Influence of Cool-Down Temperature Histories on the Residual Stresses in Fibrous Metal-Matrix Composites

996 Albert W. Chan, Douglas E. Larive and Roger J. Morgan

Anisotropic Permeability of Fiber Preforms: Constant Flow Rate Measurement

1009 Ilsup Chung, C. T. Sun and I. Y. Chang

Modeling Creep in Thermoplastic Composites

1030 D. L. Hiemstra and N. R. Sottos

Thermally Induced Interfacial Microcracking in Polymer Matrix Composites

Vol. 27, pp. 1053–1144

CONTENTS

No. 11, 1993

1054 Keiichiro Tohgo, Albert S. D. Wang and Tsu-Wei Chou

A Criterion for Splitting Crack Initiation in Unidirectional Fiber-Reinforced Composites

1077 Hiroshi Suemasu

Postbuckling Behaviors of Composite Panels with Multiple Delaminations

1097 Harry H. Hilton and Sung Yi

Stochastic Viscoelastic Delamination Onset Failure Analysis of Composites

1114 Y. Zhang and J. Cameron

Silica Particle/Glass Fibre–Reinforced Polyester Resin

1128 R. K. Everett and J. H. Chu

Modeling of Non-Uniform Composite Microstructures

Vol. 27, pp. 1145–1235 # CONTENTS No. 12, 1993

1146 Myung Cheon Lee and Nikolaos A. Peppas

Models of Moisture Transport and Moisture-Induced Stresses in Epoxy Composites

1172 Hiroshi Suemasu

Effects of Multiple Delaminations on Compressive Buckling Behaviors of Composite Panels

1193 R. S. Lakes and K. Elms

Indentability of Conventional and Negative Poisson's Ratio Foams

1203 Balasubramaniam Shanker and Akhlesh Lakhtakia

Extended Maxwell Garnett Formalism for Composite Adhesives for Microwave-Assisted Adhesion of Polymer Surfaces

1214 Ever J. Barbero and Kevin W. Kelly

Predicting High Temperature Ultimate Strength of Continuous Fiber Metal Matrix Composites

Vol. 27, pp. 1237–1336

CONTENTS

No. 13, 1993

1238 **L. J. Lee, K. Y. Huang and Y. J. Fann**

Dynamic Responses of Composite Sandwich Plate Impacted by a Rigid Ball

1257 **D. Liu, C. Y. Lee and X. Lu**

Repairability of Impact-Induced Damage in SMC Composites

1272 **Samuel D. Bogan and Mark K. Hinders**

Dynamic Stress Concentrations in Fiber-Reinforced Composites with Interface Layers

1312 **D. J. Senor, K. L. Peddicord and L. R. Cornwell**

High Fiber Volume Fraction Metal Matrix Composites Cast under Bi-Dimensional Compression

Vol. 27, pp. 1337–1426

CONTENTS

No. 14, 1993

1338 R. H. Fenn, A. M. Jones and G. M. Wells

X-Ray Diffraction Investigation of Triaxial Residual Stresses in Composite Materials

1352 S. R. White and H. T. Hahn

Cure Cycle Optimization for the Reduction of Processing-Induced Residual Stresses in Composite Materials

1379 J. L. Chen and C. T. Sun

A Plastic Potential Function Suitable for Anisotropic Fiber Composites

1391 J.-M. Berthelot, A. Cupcic and K. A. Brou

Stress Distribution and Effective Longitudinal Young's Modulus of Unidirectional Discontinuous Fibre Composites

Vol. 27, pp. 1427–1519

CONTENTS

No. 15, 1993

1428 Akihiro Fujita, Hiroyuki Hamada and Zenichiro Maekawa

Tensile Properties of Carbon Fiber Triaxial Woven Fabric Composites

1443 Enboa Wu and Kae Shyu

Response of Composite Laminates to Contact Loads and Relationship to Low-Velocity Impact

1465 Q. Zheng and R. J. Morgan

Synergistic Thermal-Moisture Damage Mechanisms of Epoxies and Their Carbon Fiber Composites

1479 Hisao Fukunaga and Hideki Sekine

Optimum Design of Composite Structures for Shape, Layer Angle and Layer Thickness Distributions

1493 M. L. Dunn, M. Taya, H. Hatta, T. Takei and Y. Nakajima

Thermal Conductivity of Hybrid Short Fiber Composites

Vol. 27, pp. 1521–1615

CONTENTS

No. 16, 1993

1522 Douglas A. Hammond, Maurice F. Amateau and Richard A. Queeney

Cavitation Erosion Performance of Fiber Reinforced Composites

1545 T. A. Hahn

Thermal Stress Relaxation due to Plastic Flow in the Fiber Coating of a Continuous Fiber Reinforced Composite

1578 R. S. Chen, C. Y. Tu and H. S. Tsai

The Effects of Moisture upon the Optimal Temperature Path of the Viscoelastic Symmetric Composite Laminates after Post Cure

1598 Y. P. Lu, H. C. Neilson and A. J. Roscoe

On the Vibration Properties of Composite Materials and Structures

1606 Forrest Sloan

A Constant-*G* Double Cantilever Beam Fracture Specimen for Environmental Testing

Vol. 27, pp. 1617–1711

CONTENTS

No. 17, 1993

1618 Ki-Soo Kim, László Kollár and George S. Springer

A Model of Embedded Fiber Optic Fabry-Perot Temperature and Strain Sensors

1663 Ki-Soo Kim, Youssef Ismail and George S. Springer

Measurements of Strain and Temperature with Embedded Intrinsic Fabry-Perot Optical Fiber Sensors

1678 S. K. Mital, P. L. N. Murthy and C. C. Chamis

Interfacial Microfracture in High Temperature Metal Matrix Composites

1695 Gregory D. Smith and Anoush Poursartip

A Comparison of Two Resin Flow Models for Laminate Processing

Vol. 27, pp. 1713–1792

CONTENTS

No. 18, 1993

1714 S. V. Kamat and M. Manoharan

Work Hardening Behaviour of Alumina Particulate Reinforced 2024 Aluminium Alloy Matrix Composites

1722 A. Argento

Dynamic Stability of a Composite Circular Cylindrical Shell Subjected to Combined Axial and Torsional Loading

1739 Hironori Maikuma and Kenji Kubomura

Bearing Strength and Damage Progress for PAN-Based and Pitch-Based Carbon Fiber Composites

1762 Stephen C. Hill and Steven J. Winckler

The Reduction of Environmental Effects on Tension-Twist Coupled Composite Tubes

1786 Subject Index
Author Index